



The Stella Group, Ltd.

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Presentation by Scott Sklar, President, The Stella Group, Ltd.

White House Council on Environmental Quality's first GreenGov Symposium

October 5, 2010, hosted by The George Washington University, Washington, DC.

The Stella Group, Ltd.. is a strategic marketing and policy firm for clean distributed energy users and companies which include advanced batteries and controls, combined heat and power, energy efficiency, fuel cells, geo-exchange heat pumps, heat engines, minigeneratio), microhydropower, modular biomass, photovoltaics, small wind, and solar thermal (including daylighting, water heating, industrial preheat, building air-conditioning, and electric power generation). The Stella Group, Ltd. blends distributed energy technologies, aggregates financing (including leasing), with a focus on system standardization. Scott Sklar serves as Steering Committee Chair of the Sustainable Energy Coalition, composed of the renewable energy and energy efficiency trade associations and analytical groups, and sits on the national Boards of Directors of the non-profit Business Council for Sustainable Energy, Renewable Energy Policy Project, and the Sustainable Buildings Industry Council. Sklar is an Adjunct Professor at GWU teaching an interdisciplinary sustainable energy course.

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Clean Energy Reports

1. **GREENPEACE/DLR**

The world could eliminate fossil fuel use by 2090 by spending trillions of dollars on a renewable energy revolution, the European Renewable Energy Council (EREC) and environmental group Greenpeace said. The 210-page study is one of few reports -- even by lobby groups -- to look in detail at how energy use would have to be overhauled to meet the toughest scenarios for curbing greenhouse gases outlined by the U.N. a Climate Panel. "Renewable energy could provide all global energy needs by 2090," according to the study, entitled "Energy (R)evolution." EREC represents renewable energy industries and trade and research associations in Europe.

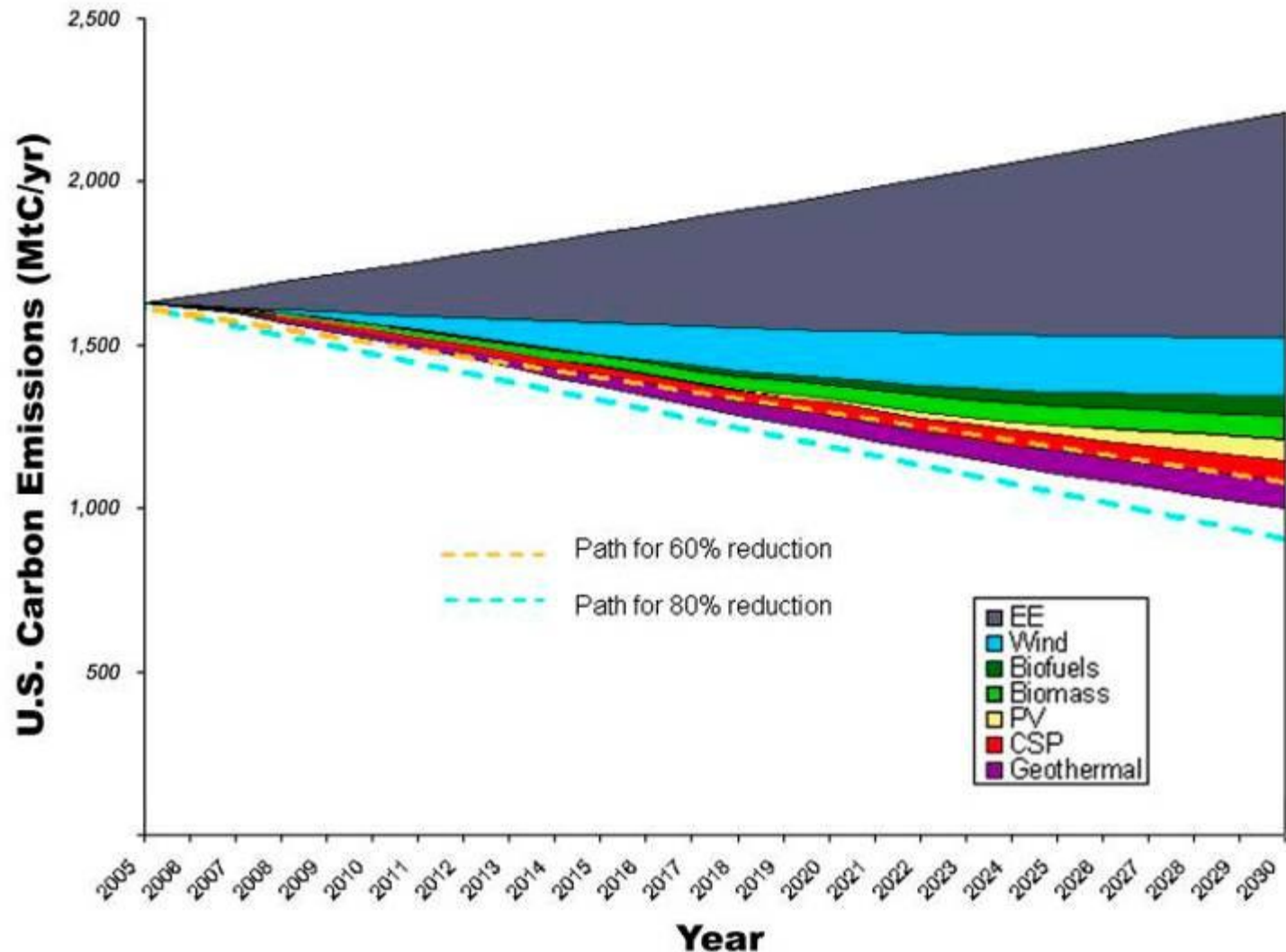
2. **ASES/NREL** U.S. Energy Experts Announce Way to Freeze Global Warming

On January 31, 2007 at a press conference in Washington, D.C., ASES unveiled a 200-page report, Tackling Climate Change in the U.S.: Potential Carbon Emissions Reductions from Energy Efficiency and Renewable Energy by 2030. The result of more than a year of study, the report illustrates how energy efficiency and renewable energy technologies can provide the emissions reductions required to address global warming. U.S. Carbon Emissions Displacement Potential from Energy Efficiency and Renewable Energy by 2030 - 57% Energy Efficiency, 43% Renewables

3. **GOOGLE**

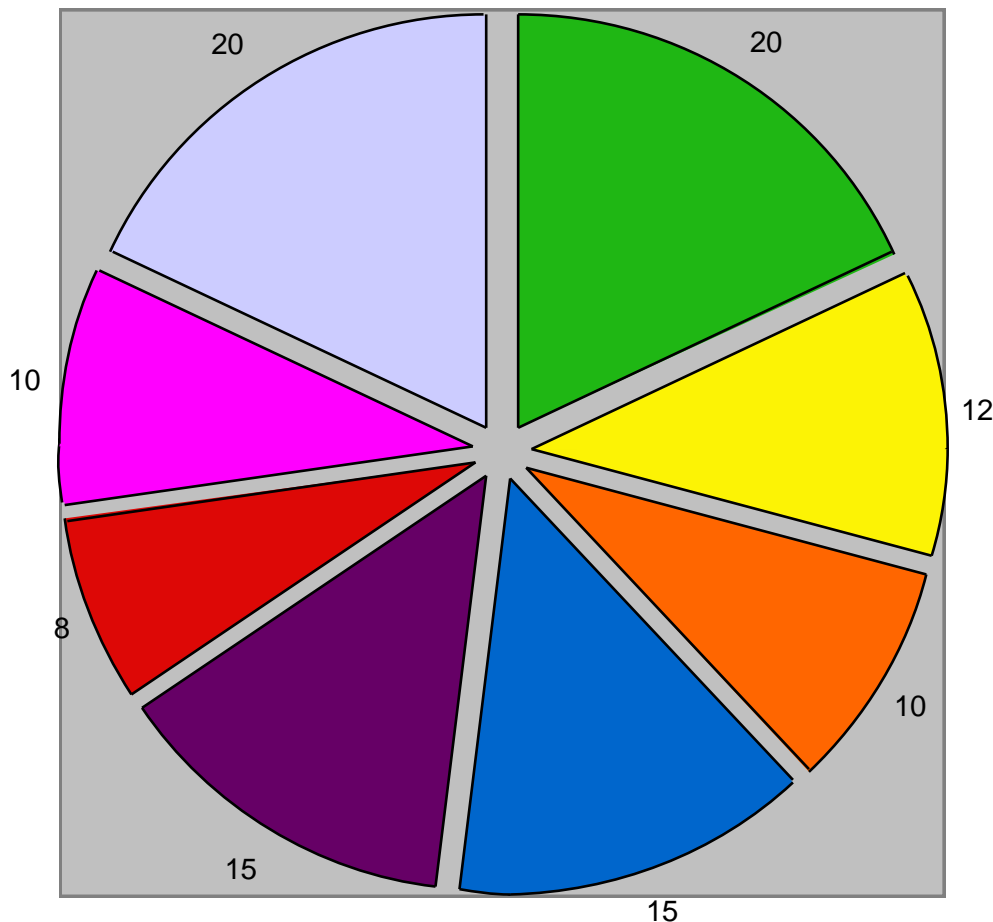
Google.org, the philanthropic arm of the search giant, has unveiled a plan to move the U.S. to a clean-energy future. The vision: In 2030, electricity will be generated not from coal or oil but from wind, solar, and geothermal power. Energy demand will be two-thirds what it is now, thanks to stringent energy-efficiency measures. Ninety percent of new vehicle sales will be plug-in hybrids. Carbon dioxide emissions will be down 48 percent. Getting there will cost \$4.4 trillion, says the plan -- but will recoup \$5.4 trillion in savings. The Clean Energy 2030 plan would require ambitious national policies, a huge boost to renewables, increased transmission capacity, a smart electricity grid, and much higher fuel-efficiency standards for vehicles.

U.S. Carbon Emissions Displacement Potential from Energy Efficiency and Renewable Energy by 2030



57% Energy Efficiency, 43% Renewables

Percentage of Clean Energy in 21st Century



- **20% Biomass Power**
- **12% Building RE: GCHP/SD**
- **10% Geothermal**
- **15% Solar-Concentrated Solar**
- **15% Solar-Distributed PV/ST**
- **8% Waste Heat**
- **10% Water Energy**
- **20% Wind Energy**

Distributed Solar - PV/ST — 15% of US Electricity

Energy on and in Rooftops - bottom line is probably half the energy for buildings can be generated on-site - so let's say 15% in US

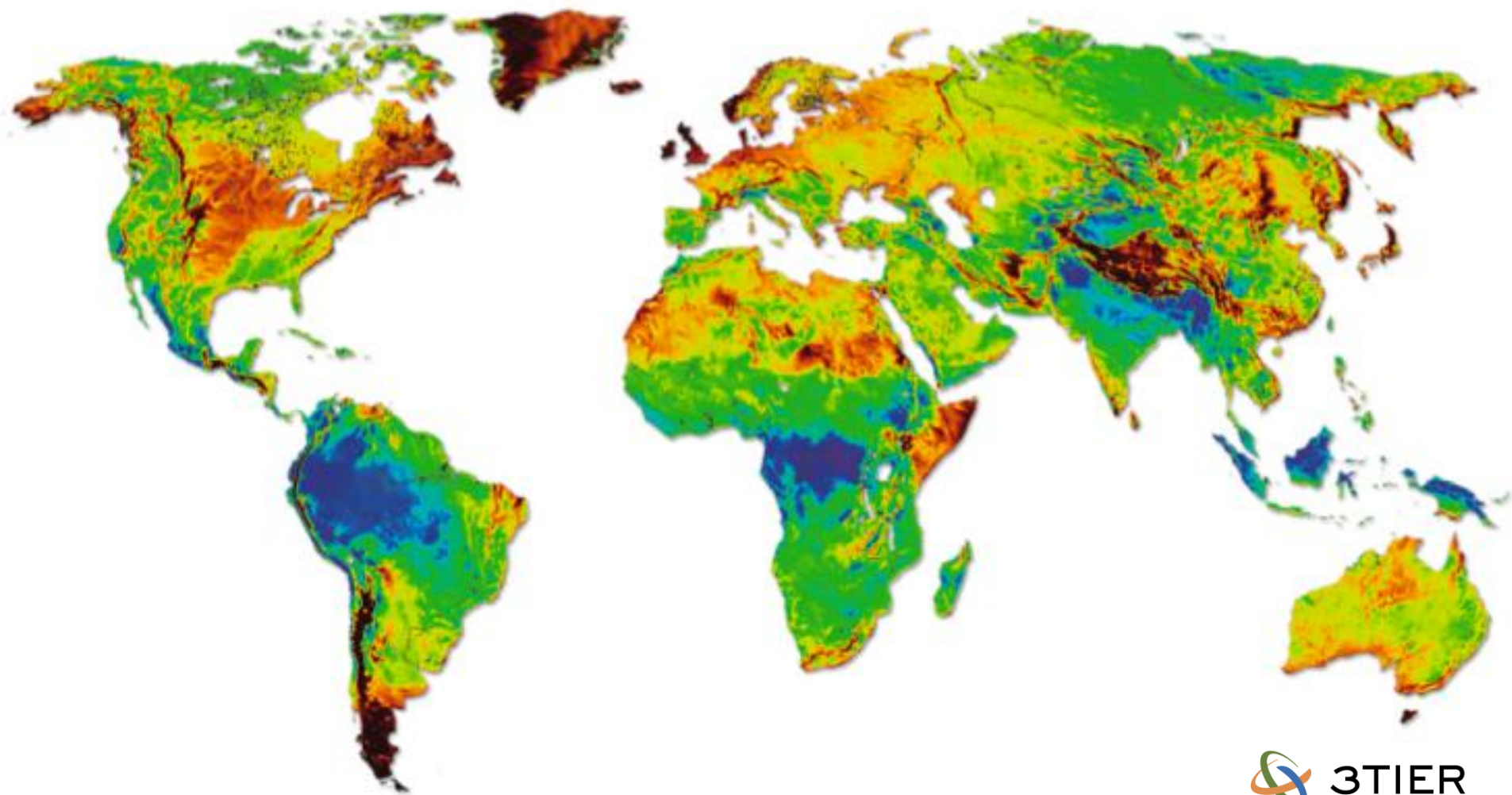
<http://www.nrel.gov/docs/fy06osti/39830.pdf>

Rooftop solar power: The solar energy potential of commercial building rooftops in the USA

- United States commercial building rooftops may be the most wasted real estate in North America. Combined, these predominantly flat rooftops represent an area of more than 1,000 square miles that, outside of their sheltering function, do nothing more than soak up the sun, literally. More than half of this space has the potential to produce energy using simple photovoltaic, or solar electric, generating stations. Bill Jeppesen, for RWE SCHOTT Solar, Inc., USA reports (8/20/04)

and

- Navigant / Energy Foundation 2005 market study - technical potential of PV in the US. Using only roof space (per Census) and using average amounts of shading, tilt, etc., within the US, their estimate was maximum technical potential





HUVCO Daylighting Solutions™



NSA Visitors Center, Ft. Meade, MD

Use of 21" tubular skylights, with 2'x2' diffuser to bring free, pure, healthy natural light into the space.

www.SunOptics.com

Camp Pendleton Marine Corp Base

Award: 2008 SDG@E Large Sustainable Communities Champion

Daylight Inside's Contribution: Designed, manufactured and installed passive daylighting Light Harvest Fixtures in 43 buildings

Results: Average 75 fc for 8 hours per day, reduction of kWh usage, safer working environment

Annual Savings: Estimated \$238,000

Referral: *"MCB Camp Pendleton is including daylighting installations in future modernization projects and would recommend the services of Daylight Inside."*

Jeff Allen, Energy Manager, Camp Pendleton, USMC



www.daylightinside.com



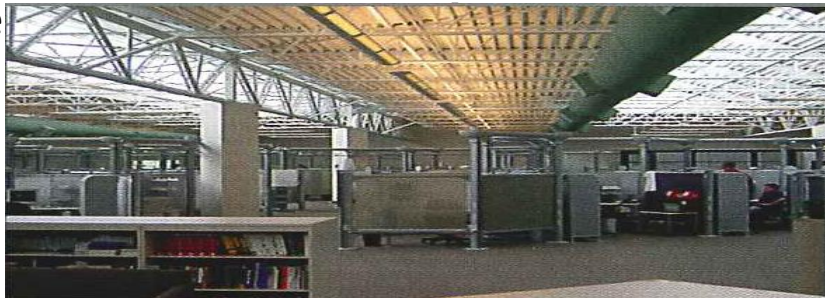
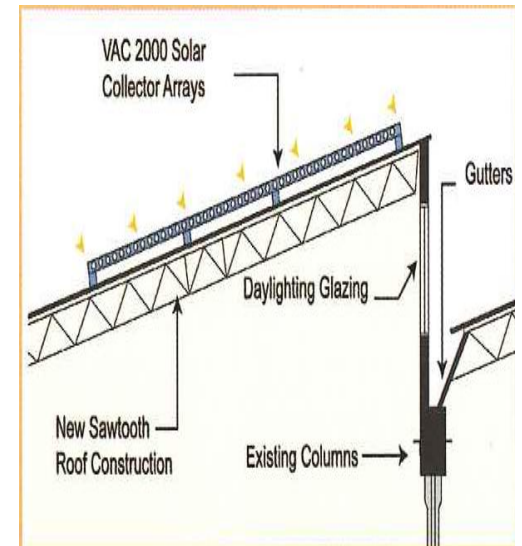
Sklar Home PV and SWH





Solar – A/C, Daylighting, SWH

- **PowerRoof™**
- **A roof integrated heating and cooling system**
- **Projects currently in place:**
 - Parker-Lincoln (Raleigh, NC) [Prototype R&D and demo project]
 - Springer-Carrier (Brazil) [Manufacturing facility, PowerRoof structure and natural daylighting]
 - Cambar Building (Charleston, SC) [Computer software office, PowerRoof structure]



National Institutes of Health/NORESCO, Raleigh, NC – 100 kW





UNI-SOLAR®
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Jet Aviation Hanger, Teeterboro Airport
Teeterboro, NJ
310 kW Installation

Solar Power for Flat and Low-Slope Roofs

POWERGUARD®

A Simple Step Toward:

- Lower Utility Bills
- Reduced Cooling and Heating
- Longer Roof Life
- Clean and Reliable Power

At last, a practical solution to implementing solar power on your commercial building - PowerGuard Modular Systems.

PowerGuard is a patented photovoltaic (PV) roof tile that delivers clean solar electricity to the building. PowerGuard allows owners of buildings with flat or moderately sloped roofs to reduce their operating costs while demonstrating a commitment to clean air.



PowerGuard Modular Systems for Flat and Low-Slope Roofs



Already providing power to industry leaders in diverse climates worldwide, PowerGuard is now available in modular, pre-engineered systems tailored to match your needs. What do modular systems mean for you?

- Low Cost
- Fast Delivery
- Simple Installation
- Tax Incentives

100% financing available to qualifying customers.

POWERLIGHT

PV “Peal & Stick” Sklar Home



TSG VA Office



WASH DC - STELLA GROUP: GRANGE BUILDING - 1.5 kw





